

REMARKS

Claims 1-16, 41-50, and 66-85 are pending in the application. The Applicants' attorney has amended claims 1, 6-9, 41, and 43-44, has cancelled claims 17-40 and 51-65 without prejudice or disclaimer, and has added new dependent claims 66-85.

If after considering this response the Examiner does not allow all of the claims, then the Applicants' attorney requests that the Examiner contact him to schedule and attend a telephone interview before issuing a subsequent Office Action.

Information Disclosure Statement

In the same IDS in which the Applicants' attorney submitted the non-considered reference (Un Seul FPGA Dope Le Traitement D'Images), he also submitted the English language International Search Report for PCT/US03/34557, which indicates the degree of relevance that the International Searching Authority found for this French language reference. Per MPEP § 609.04(a)(III), this ISR satisfies the requirement for a concise explanation of the relevance of the French language reference; consequently, the Examiner must consider this reference. Copies of the ISR and MPEP § 609.04(a)(III) are attached for the Examiner's convenience.

Objections To The Specification

The Applicants' attorney has amended the title and the remainder of the specification to overcome this objection, and thus requests the Examiner to withdraw this objection.

Provisional Double Patenting Rejection

The Applicants' attorney will consider filing a terminal disclaimer if and when this rejection becomes a non-provisional rejection.

**Rejection Of Claims 1, 4-10, 41-45, and 49 Under 35 U.S.C. § 102(b) As Being
Anticipated By U.S. Patent 5,909,565 to Morikawa Et Al.**

Claim 1

Claim 1 as amended recites a hardwired-pipeline circuit operable to receive a message that includes data and that includes a header having information indicating a destination of the data, and to extract the data from the message.

For example, referring, e.g., to FIGS. 4-5 and paragraphs [57] and [97] – [100] of the patent application, in one embodiment a pipeline circuit 80 (FIG. 4) has an input-data handler 120 (FIG. 5) operable to receive via a pipeline bus 50 a message that includes data and that includes a header having information indicating a destination pipeline 74 for the data, to extract the data from the message, and to load the extracted data into a memory 92. An interface 140 is operable to retrieve the extracted data from the memory 92, and the destination pipeline 74 is operable to process the retrieved data.

In contrast, Morikawa does not disclose a hardwired-pipeline circuit operable to receive a message that includes data and that includes a header having information indicating the destination of the data, and to extract the data from the message. Referring, e.g., to Morikawa's FIG. 1, a coprocessor 102 receives an instruction via a bus 126, receives data via a bus 124, and processes the received data beginning with a first coprocessing unit 150. But neither the instruction nor the data is, or is part of, a message as recited in claim 1. Furthermore, because the bus 124 carries only data, there is no need for the coprocessor 102 to extract the data. Similar analyses apply to the Morikawa's coprocessors 202 (FIG. 4) and 302 (FIG. 10).

Claims 4-5

These claims are patentable by virtue of their respective dependencies from claim 1.

Claim 6

Claim 6 as amended recites a processor operable to broadcast a message that includes data and that includes a header having information indicating a destination of the data, and a hardwired-pipeline circuit operable to receive the message from the processor and to extract the data from the message.

For example, referring, e.g., to FIGS. 3-5 and paragraphs [57] and [95] – [100] of the patent application, in one embodiment a host processor 42 (FIG. 3) is operable to broadcast on a pipeline bus 50 a message that includes data and that includes a header having information indicating a destination of the data. A pipeline circuit 80 (FIG. 4) has an input-data handler 120 (FIG. 5) operable to receive the message from the bus 50, to extract the data from the message, and to load the extracted data into a memory 92. An interface 140 is operable to retrieve the extracted data from the memory 92, and the destination pipeline 74 is operable to process the retrieved data.

In contrast, Morikawa does not disclose a processor operable to broadcast a message that includes data and that includes a header having information indicating a destination of the data, and does not disclose a hardwired-pipeline circuit operable to receive the message from the processor and to extract the data from the message. Referring, e.g., to Morikawa's FIG. 4, a processor 201 provides data to a coprocessor 202 via a bus 124, and provides control information to the coprocessor via a bus 241. But neither the data nor the control information is, or is part of, a message as recited in claim 6. Furthermore, Morikawa does not disclose a hardwired-pipeline circuit operable to receive the message from the processor and to extract the data from the message for reasons similar to those recited above in support of the patentability of claim 1. Similar analyses apply to Morikawa's coprocessors 102 (FIG. 1) and 302 (FIG. 10).

Claim 7

Claim 7 as amended recites a hardwired-pipeline circuit operable to receive and process data, generate a message header that includes information indicating a destination of the processed data, generate a message that includes the processed data and the header, and provide the message to an external source.

For example, referring, e.g., to FIGS. 4-5 and paragraphs [57] and [97] – [104] of the patent application, in one embodiment a pipeline circuit 80 (FIG. 4) includes pipelines 74 that are operable to receive and process data. The pipeline circuit 80 also includes an output-data handler 126 (FIG. 5) operable to generate a message header that includes information indicating a destination (e.g., a thread of a software application running on the host processor 42 of FIG. 3) of the processed data, to generate a message that includes the processed data and the header, and to provide the message to an external source (e.g., the host processor 42).

In contrast, Morikawa does not disclose a hardwired-pipeline circuit operable to generate a message header that includes information indicating a destination of processed data, to generate a message that includes the processed data and the header, and to provide the message to an external source. Referring, e.g., to Morikawa's FIG. 4, a coprocessor 202 receives data via a bus 124, and processes the received data with a coprocessor unit 211. Then, the coprocessor 102 provides the data to the processor 201 via a bus 125, and may provide control information to the processor via the bus 242. But the control information does not indicate a destination of the processed data, because an instruction executed by the processor 201 provides the destination; consequently, the control information is not information indicating a destination of the processed data. For this and other reasons, neither the data nor the control information is, or is part of, a message as recited in claim 7. Therefore, because the coprocessor 202 does not generate a message, it does not and cannot provide the message to an external source (even if one considers the processor 201 an external source). Similar analyses apply to Morikawa's coprocessors 102 (FIG. 1) and 302 (FIG. 10).

Claim 8

Claim 8 as amended is patentable for reasons similar to those discussed above in support of the patentability of claim 7.

Claim 9

Claim 9 as amended is patentable for reasons similar to those discussed above in support of the patentability of claims 1 and 7.

Claim 10

This claim is patentable by virtue of its dependency from claim 9.

Claim 41

Claim 41 as amended is patentable for reasons similar to those discussed above in support of the patentability of claim 1.

Claim 42

This claim is patentable by virtue of its respective dependency from claim 41.

Claim 43

Claim 43 as amended is patentable for reasons similar to those discussed above in support of the patentability of claim 7.

Claim 44

Claim 44 as amended is patentable for reasons similar to those discussed above in support of the patentability of claims 1 and 7.

Claims 45 and 49

These claims are patentable by virtue of their respective dependencies from claim 44.

Rejection Of Claims 1, 4, And 41-43 Under 35 U.S.C. § 102(b) As Being Anticipated
By Hennessy and Patterson, “Computer Architecture – A Quantitative Approach,
2nd, Edition,” 1996

Claim 1

Claim 1 as amended recites a hardwired-pipeline circuit operable to receive a message that includes data and that includes a header having information indicating a destination of the data, and to extract the data from the message.

In contrast, Hennessy does not disclose receiving, or extracting data from, a message.

Claim 4

Claim 4 is patentable by virtue of its dependency from claim 1.

Claim 41

Claim 41 as amended is patentable for reasons similar to those discussed above in support of the patentability of claim 1 over Hennessy.

Claim 42

This claim is patentable by virtue of its respective dependency from claim 41.

Claim 43

Claim 43 as amended is patentable because Hennessy does not disclose forming a message.

Rejection Of Claims 2-3, 11-16, 46-48, And 50 Under 35 U.S.C. § 103(a) As
Being Unpatentable Over The Respective Combinations Of References Cited In
The Office Action

These claims are patentable by virtue of their respective dependencies from claims 1, 9, and 44.

New Dependent Claims 66-85

These claims find support, e.g., in FIG. 5 and paragraphs [95] – [104] of the patent application.

CONCLUSION

In view of the foregoing, claims 2-5, 10-16, 42, and 45-50 as previously pending, claims 1, 6-9, 41, and 43-44 as amended, and new dependent claims 66-85 are in condition for allowance. Therefore, the issuance of a formal Notice of Allowance at an early date is respectfully requested.

In the event additional fees are due as a result of this amendment, payment for those fees has been enclosed in the form of a check. Should further payment be required to cover such fees you are hereby authorized to charge such payment to Deposit Account No. 07-1897.

Respectfully submitted,

GRAYBEAL JACKSON HALEY LLP

Dated: 02- 15-07

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[Go to MPEP - Table of Contents](#)[browse before](#)

609.04(a) Content Requirements for an Information Disclosure Statement [R-5] - 600 Parts, Form, and Content of Application

609.04(a) Content Requirements for an Information Disclosure Statement [R-5]

An information disclosure statement (IDS) must comply with the provisions of **37 CFR 1.98** as to content for the information listed in the IDS to be considered by the Office. Each information disclosure statement must comply with the applicable provisions of subsection I., II., and III. below.

I. LIST OF ALL PATENTS, PUBLICATIONS, U.S. APPLICATIONS, OR OTHER INFORMATION

Each information disclosure statement must include a list of all patents, publications, U.S. applications, or other information submitted for consideration by the Office.

37 CFR 1.98(a)(1) requires the following format for an IDS listing: (A) a specified format/identification for each page of an IDS, and that U.S. patents and U.S. patent application publications be listed in a section separately from citations of other documents; (B) a column that provides a space next to each document listed to permit the examiner's initials; and (C) a heading that identifies the list as an IDS.

37 CFR 1.98(a)(1) specifically requires that U.S. patents and U.S. patent application publications be listed separately from the citations of other documents. The separation of citations will permit the Office to obtain the U.S. patent numbers and the U.S. patent application publication numbers by optical character recognition (OCR) from the scanned documents such that the documents can be made available electronically to the examiner to facilitate searching and retrieval of the cited U.S. patents and U.S. patent application publications from the Office's search databases. Applicants will comply with this requirement if they use forms PTO/SB/08A and 08B **, which provide a separate section for listing U.S. patents and U.S. patent application publications. Applicants who do not use these forms for submitting an IDS must make sure that the U.S. patents and U.S. patent application publications are listed in a separate section from citations of other documents.

37 CFR 1.98(a)(1) also requires that each page of the list must clearly identify the application number of the application in which the IDS is being submitted, if known. In the past, the Office has experienced problems associated with lists that do not properly identify the application in which the IDS is being submitted (e.g., when applicants submit a list that includes copies of **>PTO/SB/08< or PTO-892 forms from other applications). Even though the IDS transmittal letter had the proper application number, each page of the list did not include the proper application number, but instead had the application numbers of the other applications. If the pages of the list became separated, the Office could not associate the pages with the proper

In addition, 37 CFR 1.98(a)(1) requires that the list must include a column that provides a space next to each document listed in order to permit the examiner to enter his or her initials next to the citations of the documents that have been considered by the examiner. This provides a notification to the applicant and a clear record in the application to indicate which documents have been considered by the examiner in the application. Applicants are strongly discouraged from submitting a list that includes copies of PTO/SB/08 ** or PTO-892 forms from other applications. A completed PTO/SB/08 ** form from another application may already have initials of an examiner and the application number of another application. This information will likely confuse the record. Furthermore, when the spaces provided on the form have initials of an examiner, there are no spaces available next to the documents listed for the examiner of the subsequent application to provide his or her initials, and the previously relevant initials may be erroneously construed as being applied for the current application.

37 CFR 1.98(a)(1) also requires that each page of the list include a heading that clearly indicates that the list is an IDS. Since the Office treats an IDS submitted by the applicant differently than information submitted by a third-party (e.g., the Office may discard any non-compliant third-party submission under 37 CFR 1.99), a heading on each page of the list to indicate that the list is an IDS would promote proper treatment of the IDS submitted by the applicant and reduce handling errors.

37 CFR 1.98(b) requires that each item of information in an IDS be identified properly. U.S. patents must be identified by the inventor, patent number, and issue date. U.S. patent application publications must be identified by the applicant, patent application publication number, and publication date. U.S. applications must be identified by the inventor, the eight digit application number (the two digit series code and the six digit serial number), and the filing date. If a U.S. application being listed in an IDS has been issued as a patent or has been published, the applicant should list the patent or application publication in the IDS instead of the application. Each foreign patent or published foreign patent application must be identified by the country or patent office which issued the patent or published the application, an appropriate document number, and the publication date indicated on the patent or published application. Each publication must be identified by publisher, author (if any), title, relevant pages of the publication, and date and place of publication. The date of publication supplied must include at least the month and year of publication, except that the year of publication (without the month) will be accepted if the applicant points out in the information disclosure statement that the year of publication is sufficiently earlier than the effective U.S. filing date and any foreign priority date so that the particular month of publication is not in issue. The place of publication refers to the name of the journal, magazine, or other publication in which the information being submitted was published. Pending U.S. applications that are being cited can be listed under the non-patent literature section or in a new section appropriately labeled.

The list of information complying with the format requirements of 37 CFR 1.98(a)(1) and the identification requirements of 37 CFR 1.98(b) may not be incorporated into the specification of the application in which it is being supplied, but must be submitted in a separate paper. A separate list is required so that it is easy to confirm that applicant intends to submit an information disclosure statement and because it provides a readily available checklist for the examiner to indicate which identified documents have been considered. A separate list will also provide a simple means of communication to applicant to indicate the listed documents that have been considered and those listed documents that have not been considered. Use of form PTO/SB/08A and 08B, Information Disclosure Statement, to list the documents is encouraged.

II. LEGIBLE COPIES

In addition to the list of information, each information disclosure statement must also include a legible copy of:

- (A) Each foreign patent document;
- (B) Each publication or that portion which caused it to be listed;
- (C) For each cited pending unpublished U.S. application, the application specification including the claims, and any drawings of the application, or that portion of the application which caused it to be listed including any claims directed to that portion, unless the cited pending U.S. application is stored in the Image File Wrapper (IFW) system. The requirement in 37 CFR 1.98(a)(2)(iii) for a legible copy of the specification, including the claims, and drawings of each cited pending U.S. patent application (or portion of the application which caused it to be listed) is *sua sponte* waived where the cited pending application is stored in the USPTO's IFW system. See *Waiver of the Copy Requirement in 37 CFR 1.98 for Cited Pending U.S. Patent Applications*, 1287 O.G. 163 (Oct. 19, 2004); and
- (D) All other information or that portion which caused it to be listed. The requirement for a copy of each U.S. patent or U.S. patent application publication listed in an IDS, has been eliminated, unless required by the Office. 37 CFR 1.98(a)(2). 37 CFR 1.98(a)(2)(iii) requires a copy of a pending U.S. application that is being cited in an IDS if (A) the cited information is not part of the specification, including the claims, and the drawings (e.g., an Office Action, remarks in an amendment paper, etc.), or (B) the cited application is not stored in the USPTO's IFW system. The requirement in 37 CFR 1.98(a)(2)(iii) for a legible copy of the specification, including the claims, and drawings of each cited pending U.S. patent application (or portion of the application which caused it to be listed) is *sua sponte* waived where the cited pending application is stored in the USPTO's IFW system. A pending U.S. application only identified in the specification's background information rather than being cited separately on an IDS listing is not part of an IDS submission. Therefore, the requirements of 37 CFR 1.98(a)(2)(iii) of supplying a copy of the pending application is not applicable. Pursuant to 37 CFR 1.98(a)(2)(iii), applicant may choose to cite only a portion of a pending application including any claims directed to that portion rather than the entire application. There are exceptions to this requirement that a copy of the information must be provided. First, 37 CFR 1.98(d) states that a copy of any patent, publication, pending U.S. application, or other information listed in an information disclosure statement is not required to be provided if: (A) the information was previously cited by or submitted to, the Office in a prior application, provided that the prior application is properly identified in the IDS and is relied on for an earlier filing date under 35 U.S.C. 120; and (B) the IDS submitted in the earlier application complies with 37 CFR 1.98(a)-(c). If both of these conditions are met, the examiner will consider the information previously cited or submitted to the Office and considered by the Office in a prior application relied on under 35 U.S.C. 120. This exception to the requirement for copies of information does not apply to information which was cited in an international application under the Patent Cooperation Treaty. If the information cited or submitted in the prior application was not in English, a concise explanation of the relevance of the information to the new application is not required unless the relevance of the information differs from its relevance as explained in the prior application. See subsection III. below. Second, 37 CFR 1.98(c) states that when the disclosures of two or more patents or publications listed in an information disclosure statement are substantively cumulative, a copy of one of the patents or publications may be submitted without copies of the other patents or publications provided that a statement is made that these other patents or publications are cumulative. The examiner will then consider only the patent or publication of which a copy is submitted and will so indicate on the list, form ** PTO/SB/08A and 08B, submitted, e.g., by crossing out the listing of the cumulative information. But see *Semiconductor Energy Laboratory Co. v. Samsung Electronics Co.*, 204 F.3d 1368, 1374, 54 USPQ2d 1001, 1005 (Fed. Cir. 2000) (Reference was not cumulative since it contained a more complete combination of the claimed elements than any other reference before the

examiner. "A withheld reference may be highly material when it discloses a more complete combination of relevant features, even if those features are before the patent examiner in other references." (citations omitted).) **37 CFR 1.98(a)(3)(ii)** states that if a written English language translation of a non-English language document, or portion thereof, is within the possession, custody or control of, or is readily available to any individual designated in **37 CFR 1.56(c)**, a copy of the translation shall accompany the statement. Translations are not required to be filed unless they have been reduced to writing and are actually translations of what is contained in the non-English language information. If no translation is submitted, the examiner will consider the information in view of the concise explanation and insofar as it is understood on its face, e.g., drawings, chemical formulas, English language abstracts, in the same manner that non-English language information in Office search files is considered by examiners in conducting searches. Electronic means or medium for filing IDSs are not permitted except for: (A) citations to U.S. patents and U.S. patent application publications in an IDS filed via the Office's Electronic Filing System (EFS) (see MPEP § 609.07); or (B) a compact disc (CD) that has tables, sequence listings, or program listings included in a paper IDS in compliance with **37 CFR 1.52(e)**. A CD cannot be used to submit an IDS listing or copies of the documents cited in the IDS.

III. CONCISE EXPLANATION OF RELEVANCE FOR NON-ENGLISH LANGUAGE INFORMATION

Each information disclosure statement must further include a concise explanation of the relevance, as it is presently understood by the individual designated in **37 CFR 1.56(c)** most knowledgeable about the content of the information listed that is not in the English language. The concise explanation may be either separate from the specification or part of the specification. If the concise explanation is part of the specification, the IDS listing should include the page(s) or line(s) numbers where the concise explanation is located in the specification.

The requirement for a concise explanation of relevance is limited to information that is not in the English language. The explanation required is limited to the relevance as understood by the individual designated in **37 CFR 1.56(c)** most knowledgeable about the content of the information at the time the information is submitted to the Office. If a complete translation of the information into English is submitted with the non-English language information, no concise explanation is required. An English-language equivalent application may be submitted to fulfill this requirement if it is, in fact, a translation of a foreign language application being listed in an information disclosure statement. There is no requirement for the translation to be verified. Submission of an English language abstract of a reference may fulfill the requirement for a concise explanation. Where the information listed is not in the English language, but was cited in a search report or other action by a foreign patent office in a counterpart foreign application, the requirement for a concise explanation of relevance can be satisfied by submitting an English-language version of the search report or action which indicates the degree of relevance found by the foreign office. This may be an explanation of which portion of the reference is particularly relevant, to which claims it applies, or merely an "X", "Y", or "A" indication on a search report. The requirement for a concise explanation of non-English language information would not be satisfied by a statement that a reference was cited in the prosecution of a United States application which is not relied on under **35 U.S.C. 120**.

If information cited or submitted in a prior application relied on under **35 U.S.C. 120** was not in English, a concise explanation of the relevance of the information to the new application is not required unless the relevance of the information differs from its relevance as explained in the prior application.

The concise explanation may indicate that a particular figure or paragraph of the patent or publication is relevant to the claimed invention. It might be a simple statement pointing to similarities between the item of information and the claimed invention. It is permissible but not necessary to discuss differences between the cited information and the claims. However, see

Semiconductor Energy Laboratory Co. v. Samsung Electronics Co., 204 F.3d 1368, 1376, 54 USPQ2d 1001, 1007 (Fed. Cir. 2000) ("[A]lthough MPEP Section 609A(3) allows the applicant some discretion in the manner in which it phrases its concise explanation, it nowhere authorizes the applicant to intentionally omit altogether key teachings of the reference.").

In *Semiconductor Energy Laboratory*, patentee during prosecution submitted an untranslated 29-page Japanese reference as well as a concise explanation of its relevance and an existing one-page partial English translation, both of which were directed to less material portions of the reference. The untranslated portions of the Japanese reference "contained a more complete combination of the elements claimed [in the patent] than anything else before the PTO." 204 F.3d at 1376, 54 USPQ2d at 1005. The patentee, whose native language was Japanese, was held to have understood the materiality of the reference. "The duty of candor does not require that the applicant translate every foreign reference, but only that the applicant refrain from submitting partial translations and concise explanations that it knows will misdirect the examiner's attention from the reference's relevant teaching." 204 F.3d at 1378, 54 USPQ2d at 1008.

Although a concise explanation of the relevance of the information is not required for English language information, applicants are encouraged to provide a concise explanation of why the English-language information is being submitted and how it is understood to be relevant. Concise explanations (especially those which point out the relevant pages and lines) are helpful to the Office, particularly where documents are lengthy and complex and applicant is aware of a section that is highly relevant to patentability or where a large number of documents are submitted and applicant is aware that one or more are highly relevant to patentability.

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Last Modified: 12/05/2006 11:30:05

[Go to MPEP - Table of Contents](#)

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

PCT

To:
 GRAYBEAL JACKSON HALEY LLP
 Attn. Santarelli, Bryan A.
 155-108th Avenue NE
 Suite 350
 Bellevue, WA 98004
 UNITED STATES OF AMERICA

RECEIVED
 DEC 28 2004

GRAYBEAL JACKSON
 HALEY LLP

NOTIFICATION OF TRANSMITTAL OF
 THE INTERNATIONAL SEARCH REPORT
 OR THE DECLARATION

(PCT Rule 44.1)

Date of mailing
 (day/month/year)

21/12/2004

Applicant's or agent's file reference 1934-11-4	FOR FURTHER ACTION See paragraphs 1 and 4 below
International application No. PCT/US 03/34557	International filing date (day/month/year) 31/10/2003
Applicant LOCKHEED MARTIN CORPORATION	

1. The applicant is hereby notified that the International Search Report has been established and is transmitted herewith.

Filing of amendments and statement under Article 19:

The applicant is entitled, if he so wishes, to amend the claims of the International Application (see Rule 46):

When? The time limit for filing such amendments is normally 2 months from the date of transmittal of the International Search Report; however, for more details, see the notes on the accompanying sheet.

Where? Directly to the International Bureau of WIPO
 34, chemin des Colombettes
 1211 Geneva 20, Switzerland
 Facsimile No.: (41-22) 740.14.35

For more detailed instructions, see the notes on the accompanying sheet.

2. The applicant is hereby notified that no International Search Report will be established and that the declaration under Article 17(2)(a) to that effect is transmitted herewith.

3. With regard to the protest against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.

no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Further action(s):** The applicant is reminded of the following:

Shortly after 18 months from the priority date, the International application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the International application, or of the priority claim, must reach the International Bureau as provided in Rules 90bis.1 and 90bis.3, respectively, before the completion of the technical preparations for International publication.

Within 19 months from the priority date, a demand for International preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until 30 months from the priority date (in some Offices even later).

Within 20 months from the priority date, the applicant must perform the prescribed acts for entry into the national phase before all designated Offices which have not been elected in the demand or in a later election within 19 months from the priority date or could not be elected because they are not bound by Chapter II.

Name and mailing address of the International Searching Authority  European Patent Office, P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer Katrin Sommermeyer ENTERED IN DOCKET
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These Notes are intended to give the basic instructions concerning the filing of amendments under article 19. The Notes are based on the requirements of the Patent Cooperation Treaty, the Regulations and the Administrative Instructions under that Treaty. In case of discrepancy between these Notes and those requirements, the latter are applicable. For more detailed information, see also the PCT Applicant's Guide, a publication of WIPO.

In these Notes, "Article", "Rule", and "Section" refer to the provisions of the PCT, the PCT Regulations and the PCT Administrative Instructions respectively.

INSTRUCTIONS CONCERNING AMENDMENTS UNDER ARTICLE 19

The applicant has, after having received the international search report, one opportunity to amend the claims of the international application. It should however be emphasized that, since all parts of the international application (claims, description and drawings) may be amended during the international preliminary examination procedure, there is usually no need to file amendments of the claims under Article 19 except where, e.g. the applicant wants the latter to be published for the purposes of provisional protection or has another reason for amending the claims before international publication. Furthermore, it should be emphasized that provisional protection is available in some States only.

What parts of the International application may be amended?

Under Article 19, only the claims may be amended.

During the international phase, the claims may also be amended (or further amended) under Article 34 before the International Preliminary Examining Authority. The description and drawings may only be amended under Article 34 before the International Examining Authority.

Upon entry into the national phase, all parts of the international application may be amended under Article 28 or, where applicable, Article 41.

When? Within 2 months from the date of transmittal of the international search report or 16 months from the priority date, whichever time limit expires later. It should be noted, however, that the amendments will be considered as having been received on time if they are received by the International Bureau after the expiration of the applicable time limit but before the completion of the technical preparations for international publication (Rule 46.1).

Where not to file the amendments?

The amendments may only be filed with the International Bureau and not with the receiving Office or the International Searching Authority (Rule 46.2).

Where a demand for international preliminary examination has been filed, see below.

How? Either by cancelling one or more entire claims, by adding one or more new claims or by amending the text of one or more of the claims as filed.

A replacement sheet must be submitted for each sheet of the claims which, on account of an amendment or amendments, differs from the sheet originally filed.

All the claims appearing on a replacement sheet must be numbered in Arabic numerals. Where a claim is cancelled, no renumbering of the other claims is required. In all cases where claims are renumbered, they must be renumbered consecutively (Administrative Instructions, Section 205(b)).

The amendments must be made in the language in which the international application is to be published.

What documents must/may accompany the amendments?

Letter (Section 205(b));

The amendments must be submitted with a letter.

The letter will not be published with the international application and the amended claims. It should not be confused with the "Statement under Article 19(1)" (see below, under "Statement under Article 19(1)").

The letter must be in English or French, at the choice of the applicant. However, if the language of the international application is English, the letter must be in English; if the language of the international application is French, the letter must be in French.

NOTES TO FORM PCT/ISA/220 (continued)

The letter must indicate the differences between the claims as filed and the claims as amended. It must, in particular, indicate, in connection with each claim appearing in the international application (it being understood that identical indications concerning several claims may be grouped), whether

- (i) the claim is unchanged;
- (ii) the claim is cancelled;
- (iii) the claim is new;
- (iv) the claim replaces one or more claims as filed;
- (v) the claim is the result of the division of a claim as filed.

The following examples illustrate the manner in which amendments must be explained in the accompanying letter:

1. [Where originally there were 48 claims and after amendment of some claims there are 51]:
"Claims 1 to 29, 31, 32, 34, 35, 37 to 48 replaced by amended claims bearing the same numbers; claims 30, 33 and 36 unchanged; new claims 49 to 51 added."
2. [Where originally there were 15 claims and after amendment of all claims there are 11]:
"Claims 1 to 15 replaced by amended claims 1 to 11."
3. [Where originally there were 14 claims and the amendments consist in cancelling some claims and in adding new claims]:
"Claims 1 to 6 and 14 unchanged; claims 7 to 13 cancelled; new claims 15, 16 and 17 added." or
"Claims 7 to 13 cancelled; new claims 15, 16 and 17 added; all other claims unchanged."
4. [Where various kinds of amendments are made]:
"Claims 1-10 unchanged; claims 11 to 13, 18 and 19 cancelled; claims 14, 15 and 16 replaced by amended claim 14; claim 17 subdivided into amended claims 15, 16 and 17; new claims 20 and 21 added."

"Statement under article 19(1)" (Rule 46.4)

The amendments may be accompanied by a statement explaining the amendments and indicating any impact that such amendments might have on the description and the drawings (which cannot be amended under Article 19(1)).

The statement will be published with the international application and the amended claims.

It must be in the language in which the international application is to be published.

It must be brief, not exceeding 500 words if in English or if translated into English.

It should not be confused with and does not replace the letter indicating the differences between the claims as filed and as amended. It must be filed on a separate sheet and must be identified as such by a heading, preferably by using the words "Statement under Article 19(1)."

It may not contain any disparaging comments on the international search report or the relevance of citations contained in that report. Reference to citations, relevant to a given claim, contained in the international search report may be made only in connection with an amendment of that claim.

Consequence if a demand for international preliminary examination has already been filed

If, at the time of filing any amendments under Article 19, a demand for international preliminary examination has already been submitted, the applicant must preferably, at the same time of filing the amendments with the International Bureau, also file a copy of such amendments with the International Preliminary Examining Authority (see Rule 62.2(a), first sentence).

Consequence with regard to translation of the international application for entry into the national phase

The applicant's attention is drawn to the fact that, where upon entry into the national phase, a translation of the claims as amended under Article 19 may have to be furnished to the designated/elected Office, instead of, or in addition to, the translation of the claims as filed.

For further details on the requirements of each designated/elected Office, see Volume II of the PCT Applicant's Guide.

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 1934-11-4	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/US 03/34557	International filing date (day/month/year) 31/10/2003	(Earliest) Priority Date (day/month/year) 31/10/2002
Applicant LOCKHEED MARTIN CORPORATION		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 4 sheets.

It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
- the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).
- b. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international search was carried out on the basis of the sequence listing:
- contained in the international application in written form.
- filed together with the international application in computer readable form.
- furnished subsequently to this Authority in written form.
- furnished subsequently to this Authority in computer readable form.
- the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished
2. Certain claims were found unsearchable (See Box I).
3. Unity of invention is lacking (see Box II).

4. With regard to the title,

- the text is approved as submitted by the applicant.
- the text has been established by this Authority to read as follows:
PIPELINE COPROCESSOR

5. With regard to the abstract,

- the text is approved as submitted by the applicant.
- the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the drawings to be published with the abstract is Figure No.

- as suggested by the applicant.
- because the applicant failed to suggest a figure.
- because this figure better characterizes the invention.

3 None of the figures.

INTERNATIONAL SEARCH REPORT

National Application No
PCT/US 03/34557

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G06F9/38 G06F15/78

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 945 788 A (TEXAS INSTRUMENTS INC) 29 September 1999 (1999-09-29) page 1	1-27
X	EP 1 061 438 A (HEWLETT PACKARD CO) 20 December 2000 (2000-12-20) page 4	1-27
X	LECURIEUX-LAFAYETTE G: "UN SEUL FPGA DOPO LETRAITEMENT D'IMAGES" ELECTRONIQUE, CEP COMMUNICATION, PARIS, FR, no. 55, 1996, pages 98,101-103, XP000551946 ISSN: 1157-1152 the whole document	1-27

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

& document member of the same patent family

Date of the actual completion of the International search	Date of mailing of the International search report
10 December 2004	21/12/2004
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel: (+31-70) 340-2040, Tx: 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer Kamps, S

INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 03/34557

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 583 964 A (WANG SHAY-PING T) 10 December 1996 (1996-12-10) abstract -----	1-4, 16, 18-21
X	VERMEULEN F ET AL: "Flexible hardware acceleration for multimedia oriented microprocessors" MICRO-33. PROCEEDINGS OF THE 33RD. ANNUAL ACM/IEEE INTERNATIONAL SYMPOSIUM ON MICROARCHITECTURE. MONTEREY, CA, DEC. 10 - 13, 2000, PROCEEDINGS OF THE ANNUAL ACM/IEEE INTERNATIONAL SYMPOSIUM ON MICROARCHITECTURE, LOS ALAMITOS, CA : IEEE COMP. SOC, US, 10 December 2000 (2000-12-10), pages 171-177, XP010528885 ISBN: 0-7695-0924-X page 1 -----	1, 16, 18

INTERNATIONAL SEARCH REPORT

Information on patent family members

National Application No

PCT/US 03/34557

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
EP 0945788	A	29-09-1999	DE EP JP US	69919059 D1 0945788 A2 11272631 A 6256724 B1	09-09-2004 29-09-1999 08-10-1999 03-07-2001
EP 1061438	A	20-12-2000	EP EP WO JP	1061438 A1 1104561 A1 0077626 A1 2003501775 T	20-12-2000 06-06-2001 21-12-2000 14-01-2003
US 5583964	A	10-12-1996	AU CA CN DE DE DE GB WO US	2126995 A 2189148 A1 1150847 A 19581638 C2 19581638 T0 29521338 U1 2302192 A 9530194 A1 5740325 A	29-11-1995 09-11-1995 28-05-1997 24-06-1999 17-04-1997 20-03-1997 08-01-1997 09-11-1995 14-04-1998